# Ejercicio16sec2.4grossman2ed.

BY FELIPECAMARGO

Para que valores de $\alpha$ la matriz

$$\begin{pmatrix} \alpha & -3 \\ 4 & 1-\alpha \end{pmatrix}$$

no es invertible?

Respuesta:

$\begin{vmatrix} \alpha & -3 \\ 4 & 1-\alpha \end{vmatrix} = \alpha - \alpha^2 + 12 = 0$. si 4 $o - 3$ entonces la matriz no sera invertible.

```
----------------------------------------------------------------------
| Sage Version 3.4, Release Date: 2009-03-11                         |
| Type notebook() for the GUI, and license() for information.        |
----------------------------------------------------------------------
Sage Version 3.4, Release Date: 2009-03-11
```

```
sage] A=matrix(QQ,[[4,-3],[4,1-4]])
sage] A
```

$$\begin{pmatrix} 4 & -3 \\ 4 & -3 \end{pmatrix}$$

```
sage] A.inverse
```

```
 <built-in method inverse of
sage.matrix.matrix_rational_dense.Matrix_rational_dense object at 0x875ef4c>
```

```
sage] A=matrix(QQ,[[-3,-3],[4,1+3]])
sage] A
```

$$\begin{pmatrix} -3 & -3 \\ 4 & 4 \end{pmatrix}$$

```
sage] A.inverse()
```

```
Traceback (most recent call last):
ZeroDivisionError
```

```
sage]
```

la matriz no tiene inversa con los valores ya dados.